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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/215,194	12/18/1998	HIDEYUKI IKEGAMI	862.2632	7690

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NEW YORK, NY 10112

EXAMINER

NGUYEN, TANH Q

ART UNIT	PAPER NUMBER
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2182

DATE MAILED: 08/07/2003

26

Please find below and/or attached an Office communication concerning this application or proceeding.

SK

Office Action Summary

Application No.

09/215,194

Applicant(s)

IKEGAMI ET AL.

Examiner

Tanh Q. Nguyen

Art Unit

2182

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 May 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 15,16,18-23 and 26-38 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 15,16,18-23 and 26-38 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 December 1998 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- ☐ Interview Summary (PTO-413) Paper No(s). _____
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 15-16, 18-21; 22-23, 25-28; 29-35; 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata et al. (U. S. Pat. No. 5,787,288)** in view of **Shaw (U. S. Pat. No. 6,341,373)**; and alternatively under 35 U.S.C. 103(a) as being unpatentable over **Shaw** in view of **Nagata et al.**

4. As per claim 15, **Nagata et al.** (Nagata) teaches an image forming apparatus [10, FIG. 8] for forming an image in accordance with control codes, the image forming apparatus comprising:

a printing unit [7, FIG. 8] for printing an image (col. 4, line 67-col. 5, line 1);

a first memory medium [3, FIG. 8] for storing control codes (col. 4, lines 56-58) to control the image forming apparatus having the printing unit;

a display means [6, FIG. 8] for displaying messages associated with image forming operations (col. 4, lines 66-67);

a second memory medium [4, FIG. 8] for storing data received from an external apparatus (col. 4, lines 58-62; col. 9, lines 13-16);

a receiving means [2, FIG. 8] for receiving from the external apparatus [9, FIG. 8] the rewrite execution codes and new control codes (col. 2, line 63-col. 3, line 3; col. 4, lines 54-56; col. 8, lines 41-48), the rewrite execution codes being adapted to execute rewriting of the control codes stored in the first memory medium;

a rewrite means (col. 5, lines 8-11) for rewriting control codes which have been stored in the first memory medium, with the new control codes stored in the second memory medium in accordance with the rewrite execution codes stored in the second memory medium (col. 6, lines 17-24; col. 6, lines 40-41; col. 6, lines 51-54; col. 7, lines 44-46; col. 8, lines 57-59);

Nagata also teaches allowing the renewal process to be completed safely (col. 3, lines 52-56), and the image forming apparatus executing its tasks under the new control codes once it is restarted after renewing the control codes (col. 8, lines 51-54); hence teaches the fact that the image forming apparatus cannot perform normal image forming operations while renewing the control codes (i.e. ~~access~~ to the control codes being inhibited while the control codes are being renewed). Since Nagata also teaches the

display means displaying a message informing a user that the control codes are being renewed (col. 5, lines 25-33), Nagata teaches **the display means displaying the message informing a user of the fact that the image forming apparatus cannot perform image forming by the printing unit during execution of the rewrite execution codes** – as Nagata's message informing a user that the control codes are being renewed also implicitly informs the user of the fact that Nagata's image forming apparatus cannot perform image forming by the printing unit.

Nagata, therefore, teaches the claimed invention except for teach a third memory medium for storing transfer control codes which are adapted to control transfer of rewrite execution codes from the external apparatus, with the receive means receiving the rewrite execution codes from the external apparatus in accordance with the transfer control codes and new control codes.

Shaw teaches a client device [10, FIG. 1] comprising:

a first memory medium [16, FIG. 1] for storing control codes [26, FIG. 1];

a second memory medium (RAM: col. 2, lines 49-51) for storing the data received by the receive means (col. 2, line 67-col. 3, line 4);

a third memory medium [14, FIG. 1] for storing transfer control codes [24, FIG. 1] which are adapted to control transfer of rewrite execution codes from the external apparatus (col. 4, lines 12-20), wherein the rewrite execution codes are adapted to execute rewrite of control codes stored in the first memory medium (col. 4, line 9-col. 5, line 15);

a receiving means [40, FIG. 1] for receiving from an external apparatus [60, FIG. 1] the rewrite execution codes in accordance with the transfer control codes (col. 4, lines 21-51) and the receiving means also receiving new control codes from the external apparatus (col. 4, line 45-col.5, line 15), with both the rewrite execution codes and the control codes being stored in the second memory medium (col. 2, line 62-col. 3, line 7);

a rewrite means for rewriting the control codes which has been stored in the first memory medium with the new control codes in the second memory medium in accordance with the rewrite execution codes stored in the second memory medium (col. 4, line 46-col. 5, line 15).

Shaw's teachings allow for a more secure download, recovery and upgrade of control codes in a first memory medium (Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Shaw's transfer control codes stored in the third memory medium, and adapted to control transfer of rewrite execution codes into Nagata's image forming apparatus because both Shaw's and Nagata's teachings are directed to renewing control codes in a first memory medium with control codes received from an external apparatus using rewrite execution codes also received from the external apparatus, and because Shaw's aforementioned teachings would allow for a more secure download, recovery and upgrade of the control codes in a first memory medium.

5. As per claim 15, the following alternate rejection also applies. Shaw does not specifically teach an image forming apparatus having a display means for displaying messages associated with an image forming operation, with the display means

displaying a message informing the user of the fact that the image forming apparatus cannot perform image forming by the printing unit during execution of the rewrite execution codes, nor a printing unit for printing an image.

Shaw teaches a client device, hence encompasses an image forming apparatus having a display means for displaying messages associated with an image forming apparatus and a printing unit for printing an image. Shaw further teaches a boot code [32, FIG.1] that is responsible for the selection and execution of either the transfer control codes in the third memory medium, or the control codes in the first memory medium (col. 2, lines 59-61). It is noted that Shaw's teachings would be well suited for a client device requiring renewal of control codes from a server, whether the client device is an image forming apparatus (with or without a printing unit for printing an image), a computer or any device that can communicate with the server using its own processor.

Shaw, therefore, teaches the claimed invention except for displaying a message informing the user of the fact that the image forming apparatus cannot perform image forming by the printing unit during execution of the rewrite execution codes.

Nagata teaches the display means implicitly displaying a message informing the user of the fact that the image forming apparatus cannot perform image forming by the printing unit during execution of the rewrite execution codes.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate Nagata's display means implicitly displaying a message informing the user of the fact that the image forming apparatus cannot perform image forming by the printing unit during execution of the rewrite execution codes into

Shaw's client device because both Shaw's and Nagata's teachings are directed to renewing control codes in a first memory medium with control codes received from an external apparatus using rewrite execution codes also received from the external apparatus, and because Nagata's aforementioned teachings would provide Shaw's user with the image formation apparatus operational status so that undesirable actions can be avoided (i.e. preventing the user from trying to power off the image formation apparatus).

6. As per claims 16, 18-21, Nagata teaches the rewrite execution codes being transferred to a non-volatile memory medium [3, FIG. 8] as the first memory medium and stored therein (col. 9, lines 14-16); an image forming control means for controlling an image forming process, and a switching means for exclusively changing over between the image forming process and the rewriting of the control codes (col. 5, lines 5-11; col. 6, lines 17-24); and the switching means exclusively changing over in accordance with a predetermined command [NSS signal] transmitted from the external apparatus (col. 6, lines 51-54).

Shaw teaches the rewrite execution codes being transferred to a non-volatile memory medium [16, FIG. 1] as the first memory medium and stored therein (col. 5, lines 13-15); the rewrite execution codes including address information of the first memory medium for executing rewriting the control codes in accordance with the address information (col. 4, line 41-col. 5, line 15; col. 5, lines 32-35); a switching means [20, FIG. 1] for exclusively changing over between an operational process and the rewriting of the control codes (col. 2, lines 59-61; col. 3, lines 23-30); the switching

means exclusively changing over in accordance with a predetermined switch [20, FIG. 1; col. 3, lines 23-30]; and the switching means exclusively changing over in accordance with a predetermined command transmitted from the external apparatus (col. 3, line 42-col. 4, line 7).

7. As per claims 22-23, 25-28, 35 and 38, Nagata in combination with Shaw teaches an image forming apparatus and rewriting of control codes in such an apparatus (see rejections to claims 15-16 and 18-21 in paragraphs 5-7 above), therefore teaches the rewrite control method for such an apparatus.

8. As per claims 29-34 and 36-37, Shaw further teaches a processor [12, FIG. 1] within client device [10, FIG. 1] for controlling the image forming apparatus in accordance with the control codes stored in the code memory (col. 4, lines 1-4), wherein the client device (hence the processor of the client device) controls the transfer of the rewrite execution codes from the external apparatus in accordance with the transfer control codes stored in the memory (col. 4, lines 8-44), the transfer of control codes from the external apparatus (col. 4, lines 45-col. 5, line 15), and the rewriting of the control codes (col. 4, lines 45-col. 5, line 15). Shaw also teaches the code memory being a rewritable memory [16, FIG. 1; col. 2, lines 43-51]; the memory being a ROM [14, FIG. 1; col. 2, lines 43-51]; and the control codes and the rewrite execution codes being programs executed by the client device (hence executed by the processor of the client device).

Nagata teaches the image forming apparatus having a printing unit having a similar construction to a copying machine (col. 5, lines 33-39), hence the image forming apparatus being a copying machine or a printer.

9. Claims 15-16, 18-21; 22-23, 25-28; 29-35; 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata et al.** in view of **Tsai (U.S. Pat. No. 5,968,141)** and further in view of **Shaw**; and alternatively under 35 U.S.C. 103(a) as being unpatentable over **Shaw** in view of **Nagata et al.** and further in view of **Tsai**.

Tsai teaches the firmware code not being accessible to the microcontroller of a peripheral device while the firmware code is being upgraded to facilitate firmware code upgrade [FIG. 3; col. 5, line 28-col. 6, line 61], hence teaches an example of the fact that the peripheral device cannot perform normal operations during execution of the rewrite execution codes.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to use **Tsai**'s teaching as one means for inhibiting access to **Nagata**'s control codes while the control codes are being renewed since **Tsai**'s teachings facilitate the renewal of the control codes.

It is further noted that preventing access to the microcontroller while the firmware code is being upgraded would maintain the integrity of the peripheral device and prevent undesirable outcomes.

10. Claims 15-16, 18-21; 22-23, 25-28; 29-35; 36-38 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata et al.** in view of **Shaw** and further

in view of **Knodt et al. (U.S. Pat. No. 5,987,535)**; and alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over **Shaw** in view of **Nagata et al.** and further in view of **Knodt et al.**. The text of those sections of Title 35, U.S. Code not included in this action can be found in the preceding prior Office Action.

11. Claims 18-20; 25-27 and 32-33 are alternatively rejected under 35 U.S.C. 103(a) as being unpatentable over **Nagata et al.** in view of **Shaw** and further in view of **Whitley et al. (U.S. Pat. No. 5,590,373)**; over **Shaw** in view of **Nagata et al.** and further in view of **Whitley et al.**; over **Nagata et al.** in view of **Shaw**, further in view of **Knodt et al.**, and further in view of **Whitley et al.**; or over **Shaw** in view of **Nagata et al.**, further in view of **Knodt et al.**, and further in view of **Whitley et al.**. The text of those sections of Title 35, U.S. Code not included in this action can be found in the preceding prior Office Action.

Response to Arguments

12. Applicant's arguments with respect to claims 15-16, 18-23, 25-38 have been considered but are moot in view of the new ground(s) of rejection. Further, applicant's arguments filed 05/22/03 have been fully considered but they are not persuasive.

Applicant argued that Nagata is not understood to disclose using the display unit to inform a user that the image forming apparatus cannot be performed during execution of rewrite execution codes. Applicant's argument is not persuasive because by using Nagata's display unit to inform the user that image forming apparatus is under

renewal of control codes, Nagata also implicitly informs the user of **the fact that image forming cannot be performed unit during execution of the rewrite execution codes** – as Nagata teaches the fact that image forming cannot be performed during renewing the control codes.

Conclusion

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tanh Quang Nguyen whose telephone number is (703) 305-0138, and whose e-mail address is tanh.nguyen36@uspto.gov. The examiner can normally be reached on Monday-Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey Gaffin, can be reached on (703) 308-3301. The fax phone number for the organization where this application or proceeding is assigned is (703) 746-7238 for After Final, (703) 746-7239 for Official, (703) 746-7240 for Customer Services, or (703) 746-5672 for Draft to the Examiner (please label "PROPOSED" or "DRAFT").

Any inquiry of a general nature relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Mail responses to this action should be sent to:

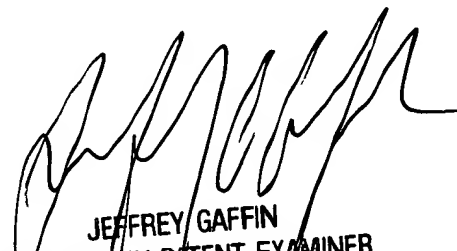
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Faxes for formal communications intended for entry should be sent to:

(703) 308-9051,

Hand-delivered responses should be brought to:

Crystal Park II, 2121 Crystal Drive, Arlington, Va, Fourth Floor
(Receptionist).


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TQN

August 4, 2003